

What is claimed is:

1. A system for maintaining qualification of an operator using an authentication recording medium comprising an authentication recording medium, a mobile terminal, a data management server, a terminal (PC) for education, a communication network and a local area network (LAN), wherein

the authentication recording medium stores readable identification authentication data and readable/writable skill authentication data;

the mobile terminal comprises an authentication recording medium read/write device and has a function to send and receive data between the data management server via the communication network;

the data management server manages the data of the system, and has a function to send and receive data between the mobile terminal via the communication network and between the PC via the LAN; and

the PC for education comprises an authentication recording medium read/write device, and has a function to enable an operator to perform self-learning and a function to send and receive data between the data management server via the LAN.

2. The system for maintaining qualification of an operator using an authentication recording medium according to claim 1, wherein

the skill authentication data stored in the authentication

recording medium includes "operation authority for system or device to be managed/maintained", "operation qualification level", "expiration date of operation qualification level" and "contents of operation record (including time, number of times and name of apparatus)".

3. The system for maintaining qualification of an operator using an authentication recording medium according to claim 2, wherein

the skill authentication data stored in the authentication recording medium further includes "data regarding work (operation) status (continuous work time)" and "past quality management data (such as operation error)".

4. The system for maintaining qualification of an operator using an authentication recording medium according to any one of claims 1 through 3, wherein

the authentication recording medium has a function to receive identification authentication based on the stored identification authentication data and to receive authentication for performing a determined range of operation based on the skill authentication data by being inserted to an authentication recording medium read/write device of a maintenance operation terminal for performing management and maintenance of a system or device to be managed/maintained.

5. The system for maintaining qualification of an operator using an authentication recording medium according to any one of claims 1 through 4, wherein

the mobile terminal has a function to read the data stored in the authentication recording medium and transfer (send) the same to the data management server via the communication network, and a function to additionally record or update the data received from the data management server in the authentication recording medium.

6. The system for maintaining qualification of an operator using an authentication recording medium according to any one of claims 1 through 5, wherein

the data management server comprises a database for data regarding work (operation) status and a database for quality management data, and has a function to collect and analyze the uploaded data, make a decision and download the decision contents to the authentication recording medium.

7. The system for maintaining qualification of an operator using an authentication recording medium according to claim 6, wherein

the contents to be downloaded to the authentication recording medium include "operation authority for system or device to be managed/maintained", "operation qualification level" and "expiration date of operation qualification level".

8. The system for maintaining qualification of an operator using an authentication recording medium according to claim 7, wherein

the contents to be downloaded to the authentication recording medium further include "data regarding work (operation) status (continuous work time)" and "past quality management data (such as operation error)".

9. The system for maintaining qualification of an operator using an authentication recording medium according to any one of claims 6 through 8, wherein

upon receiving an urgent operation approval data registered by an administrator, the data management server holds a function to download the data via the mobile terminal to the authentication recording medium.

10. The system for maintaining qualification of an operator using an authentication recording medium according to any one of claims 1 through 9, wherein

the PC for education comprises an authentication recording medium data read/write AP, an educational AP and a work AP, and has a function to provide educational material for self-learning regarding various operations, and a function to transmit a result of learning performed by the operator to the data management server, receive a content of determination from the data

management server and additionally record/update the same to the authentication recording medium.

11. The system for maintaining qualification of an operator using an authentication recording medium according to any one of claims 1 through 10, wherein

the system further comprises a maintenance operation terminal for managing/maintaining the system or device to be managed/maintained, the terminal comprising an operation AP, an authentication AP for the authentication recording medium and an authentication recording medium read/write device, the terminal having a function to read the data recorded in the authentication recording medium through the authentication recording medium read/write device, confirm identification authentication based on the identification authentication data, and authenticate a certain range of operation based on the skill authentication data.

12. The system for maintaining qualification of an operator using an authentication recording medium according to claim 11, wherein

after performing maintenance operation, the terminal for maintenance operation has a function to log the contents of an operation record and to store the contents of the operation record to the authentication recording medium.

13. An authentication recording medium used in a system for maintaining qualification of an operator, wherein

the authentication recording medium stores readable identification authentication data and readable/writable skill authentication data, and when inserted to an authentication recording medium read/write device of a terminal for maintenance operation used for managing/maintaining a system or device to be managed/maintained, the medium has a function to receive identification authentication based on the stored identification authentication data and to receive authentication to perform a certain range of operation based on the skill authentication data.

14. The authentication recording medium according to claim 13, wherein

the skill authentication data includes "operation authority for system or device to be managed/maintained", "operation qualification level", "expiration date of operation qualification level" and "contents of operation record (including time, number of times and name of apparatus)".

15. The authentication recording medium according to claim 14, wherein

the skill authentication data further includes "data regarding work (operation) status (continuous work time)" and "past quality management data (such as operation error)".

16. The authentication recording medium according to claim 14 or claim 15, wherein

the medium holds a function to download and record an urgent operation approval data from the data management server via the mobile terminal.